

REMARKS

With this Amendment, Applicants add new Claims 25-44. Therefore Claims 1-44 are all the claims currently pending in the application.

Specification

Applicants have discovered a couple of inadvertent errors in the specification which are corrected with this Amendment. These errors are merely inadvertent errors in translation. The corrected portion of the specification, without correction, contradicted the correct description earlier within the same paragraph, which describes that “it is preferable that the length of the metalized portion 7 in the optical fiber 5 located outside the package is 65 to 75mm,” and also contradicted the description of a bare portion with a length of 40mm described at page 21, lines 2-12 and page 29, line 18 through page 30, line 20.

Therefore, in view of the above, Applicants submit that the current amendments to the specification are merely correcting inadvertent errors in translation and do not constitute new matter.

New Claims

With this Amendment, Applicants add new Claims 25-44 in order more fully to cover various aspects of Applicants’ invention as disclosed in the specification. No new matter is added. New Claims 25, 30, 35, and 40 are supported in the specification at least at page 21, lines 2-12 and page 29, line 18 through page 30, line 20. New Claims 26, 31, 36, and 41 are supported

in the specification at least at page 28, line 26 through page 29, line 17. New Claims 27, 32, 37, and 42 are supported in the specification at least at page 21, lines 2-12 and page 29, line 18 through page 30, line 20. Claims 28, 33, 38, and 43 are supported in the specification at least at page 29, lines 14-17 (amended as discussed above). New Claims 29, 34, 39, and 44 are supported in the specification at least at page 21, lines 2-12, page 29, line 18 through page 30, line 20, and page 28, line 26 through page 29, line 17.

Claim Rejections

Claims 1, 2, 9, 10, 19 and 20 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Blonder et al., U.S. Patent No. 5,448,672 (“Blonder”). Claims 21-24 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Blonder. Claims 3-8 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Blonder, in view of Murata et al., U.S. Patent No. 6,123,464 (“Murata”). Claims 11-18 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Blonder, in view of Okazaki et al., U.S. Patent Publication No. 2002/0090172 (“Okazaki”).

Blonder et al. fails to teach or suggest the present invention because the area where the metalized portion is present in Blonder et al. is limited or shorter as compared with that of the present invention. Specifically, in Blonder et al., only “the portion 22 of the fiber which extends through the wall is metalized” (page 1, column 2, lines 61 through 63). Therefore, the metallization processing in Blonder et al. is equivalent to the metallization processing according to the conventional technique as described in the “related art” section of the specification of the present application (page 3, lines 16 through 25). In the metalization processing according to the

conventional technique, only a minimum necessary portion (normally having a width of about 25 mm or less) of each optical fiber is metalized.

In contrast, the fiber module defined in Claim 1 of the present application, the cladding is exposed only in the vicinity of the second end of the optical fiber and the entire optical fiber other than the portion in the vicinity of the second end is coated with a metal and/or inorganic material. Further, in the fiber module defined in Claim 2 of the present application, the cladding is exposed only in the vicinities of the first and second ends of the optical fiber, and the entire optical fiber other than the portions in the vicinities of the first and second ends is coated with a metal and /or inorganic material. Therefore, Blonder et al. fails to teach or suggest the features recited in Claim 1 or 2 of the present application.

Further, in Blonder et al., the cladding is exposed in the vicinities of both ends of the optical fiber. Therefore, Blonder et al., fails to teach or suggest the optical fiber module defined in Claim 1 of the present application, in which the cladding is exposed only in the vicinity of one end of the optical fiber.

Further, although Blonder et al. does not specifically refer to the length of the optical fiber, the ends of the optical fiber are illustrated with wavy lines in Figures 1 and 2 of Blonder et al. Therefore, it is recognized that the length of the optical fiber of Blonder et al. is longer than the length of the portion of the optical fiber, which is illustrated in Figure 1 or 2. In contrast, the optical fiber in the optical module of the present invention has a predetermined length, for example, 14 mm (page 21, line 4 in the specification of the present application). The length of the optical fiber of the present invention is shorter than a general optical fiber because it is a

module which can be connected to a general optical fiber. In the present invention, since the length of the optical fiber is relatively short, the jacket is substantially removed from the entire optical fiber which has a predetermined length. In the case where the length of the optical fiber is long, should the jacket be removed from the entire optical fiber, it would reduce the durability of the optical fiber.

Further, in Bonder et al., the metal coating is not formed by sputtering but by electroplating. Bonder et al. teach that the sputtering method is disadvantageous because the plastic jacket of the optical fiber must be removed before sputtering (column 1, lines 60 through 63). Bonder et al. also teaches that it is preferable to perform metallization by electroplating, and states that “the matte finish enhances the adhesion of the coating and eliminates the need to rely on expensive, cumbersome and less uniform prior art sputtering techniques” (column 2, lines 24 through 27). Therefore, it is recognized that the sputtering method is not adopted in Bonder et al. and that the jacket is removed only in the portion to be metalized and the vicinity thereof in Bonder et al. Hence, those skilled in the art would not have conceived of substantially removing the jacket in the entire optical fiber to substantially coat the entire optical fiber with a metal and /or inorganic material.

Therefore, in view of the above, Applicants submit that Bonder fails to anticipate Claim 1 or Claim 2. Applicants submit that neither Murata nor Okazaki remedy the above-described deficiencies of Bonder, and therefore, Claims 3-18 are patentable at least by virtue of their dependence on Claim 1 or Claim 2.

Regarding Claims 19 and 20, Applicants submit that Claims 19 and 20 are patentable at least for those reasons discussed above with respect to Claims 1 and 2. Additionally, Applicants submit that Blonder fails to disclose or suggest degassing the inside of the package, as recited in Claims 19 and 20. Blonder discloses that the package is hermetically sealed, but fails to disclose that the package is degassed.

Therefore, in view of the above, Applicants submit that Blonder fails to anticipate Claim 19 or Claim 20. Applicants further submit that Claims 21-24 are patentable at least by virtue of their dependence on Claim 19 or Claim 20.

Additionally, regarding Claims 19 through 24, Applicants submit that the methods defined in these claims have an advantageous effect that the optical module is easily produced because the length of the optical fiber is relatively short. The length of the optical module is short because the optical module is a module which can be connected to a general optical fiber.

In view of at least the above, Applicants respectfully request that the rejections of Claims 1-24 be reconsidered and withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/767,207

Q79651

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